WHAT IS CLAIMED IS:

1. A method of forming a textured metal structure comprising the steps of:

forming a textured structure comprised of substantially silicon atoms; and

replacing silicon atoms in the textured structure with metal atoms.

2. The method of Claim 1, wherein the step of forming a textured structure comprises:

depositing an amorphous or polycrystalline silicon structure by chemical vapor deposition; and

annealing the silicon structure to form a silicon surface having a textured surface morphology.

3. The method of Claim 1, wherein the step of replacing silicon atoms with metal atoms comprises exposing the textured structure to a refractory metal-halide complex.

4. The method of Claim 3, wherein the refractor metal-halide complex comprises WF_6.

5. The method of Claim 4, further comprising the step of chemically oxidizing the textured structure prior to exposing the textured structure to the refractory metal-halide complex.

6. A process for fabricating a metal-insulator-metal capacitor on a semiconductor wafer comprising the steps of:

forming a silicon electrode structure on the semiconductor wafer;

texturizing the silicon electrode structure; and

replacing the silicon in the silicon electrode structure with a metal, thereby forming a textured metal electrode.

7. The process of Claim 6, further comprising covering the textured metal electrode with a dielectric layer having a high dielectric constant.

8. The process of Claim 7, further comprising covering the dielectric layer with a metal layer.

9. The process of Claim 6, wherein the step of replacing the silicon in the silicon electrode structure comprises exposing the silicon electrode structure to a

refractory metal-halide complex.

10. The process of Claim 9, wherein the refractory metal-halide complex comprises WF_6.

11. The process of Claim 7, wherein the dielectric layer comprises a material selected from the group consisting of Ta_2O_5, $BaTiO_3$, $SrTiO_3$, $Ba_xSr_{1-x}TiO_3$, and $PbZr_xTi_{1-x}O_3$.

12. The process of Claim 8, wherein the metal layer comprises titanium.

13. A DRAM capacitor comprising:

a metal electrode having a textured surface morphology;

a dielectric layer superjacent to the metal electrode; and

a conductive layer superjacent to the dielectric layer.

14. The DRAM capacitor of Claim 13, wherein the metal electrode is comprised of substantially a refractory metal.

15. The DRAM capacitor of Claim 14, wherein the refractory metal is tungsten.

16. The DRAM capacitor of Claim 13, wherein the dielectric layer is comprised of a material selected from the group consisting of Ta_2O_5, $BaTiO_3$, $SrTiO_3$, $Ba_xSr_{1-x}TiO_3$, and $PbZr_xTi_{1-x}O_3$.

17. The DRAM capacitor of Claim 13, wherein the conductive layer comprises a refractory metal.

18. The DRAM capacitor of Claim 17, wherein the refractory metal is titanium.

19. A capacitor within an integrated circuit comprising:

a metal electrode having a textured surface;

a dielectric layer covering said textured surface; and

a second electrode covering said dielectric layer.

20. A method of forming an integrated circuit capacitor comprising:

forming a metal electrode having a textured surface;

covering said textured surface with a dielectric; and

covering said dielectric with a second electrode.